



Development Review Committee

1020 East Pioneer Road

Draper, UT 84020

STAFF REPORT

June 14, 2021

To: Jennifer Jastremsky, Zoning Administrator

Approved

Date

From: Travis Van Ekelenburg, Planner II
801-576-6522, travis.vanekelenburg@draperutah.gov

Re: T-Mobile SL04393 (Antenna Upgrade)-Permitted Use Permit Request

Application No.: USE-0038-2021

Applicant: Todd Daoust, representing T-Mobile

Project Location: Approximately 11641S Lone Peak Parkway

Current Zoning: CBP (Business/Manufacturing Park) Zone

Acreage: Approximately 1.68 Acres (Approximately 73,181 ft²)

Request: Request for approval of a Permitted Use Permit in the CBP zone regarding an existing wireless facility equipment upgrade.

SUMMARY AND BACKGROUND

This application is a request for approval of a Permitted Use Permit for approximately 1.68 acres located on the east side of Lone Peak Parkway, at approximately 11641 S Lone Peak Parkway (Exhibit B). The property is currently zoned CBP.

The wireless facility was developed in approximately 2002. Sprint Wireless is one of two carriers on the tower and this is an equipment upgrade for tower and ground equipment.

ANALYSIS



General Plan and Zoning. The Land Use Map of the General Plan calls for the Business and Light Manufacturing land use designation for the subject property (Exhibit C). This category is characterized as follows:

Business and Light Manufacturing

| LAND USE DESCRIPTION | | |
|--------------------------|--|--|
| CHARACTERISTICS | <ul style="list-style-type: none"> • Allows for a mixture of employment uses and services for these employees • Park or campus-like atmosphere • Low traffic generation • Buildings should not exceed three stories • Major entry points and features • Well landscaped perimeter and public places • Limited traffic access to major streets • Uniform design standards and aesthetics • Common off-street traffic circulation and parking areas • Pedestrian-friendly design | |
| LAND USE MIX | Primary <ul style="list-style-type: none"> • Office • Light manufacturing | Secondary <ul style="list-style-type: none"> • Retail • Service Uses |
| COMPATIBLE ZONING | <ul style="list-style-type: none"> • Light Manufacturing (M1) • Business Manufacturing Park (CBP) | |
| LOCATION | <ul style="list-style-type: none"> • Along collector and arterial streets | |

The property has been assigned the CBP zoning classification, (Exhibit D). According to Draper City Municipal Code (DCMC) Section 9-8-020 the purpose of the CBP zone *"is to provide aesthetically attractive planned developments having a mix of office, research and development, light manufacturing, and limited retail uses. Typical uses in this zone include offices, clean indoor manufacturing facilities, service retail, restaurants, athletic clubs, personal service shops, medical offices, office/warehouse buildings, and research facilities."* The CBP zoning designation surrounds the property to the west, south and east. The CSD-KMAC (Karl Malone Auto Center Commercial Special District) zone is to the north.

Request. The existing Wireless Facility was built in approximately 2002, and Sprint Wireless is the top tier carrier on the facility. T-Mobile and Sprint Wireless recently merged companies so the application will not be creating a new colocation situation as the Sprint antennas and equipment installation are going to stay as Sprint Wireless service.

The following equipment changes will be taking place:

- Remove AC breakers in PPC (cabinet)
- Remove (2) Equipment Cabinets
- Remove (6) Antennas, (2) per sector
- Remove (6) Radio Modules, (2) per sector

- Remove existing Hybrid Cables
- Remove antenna mounts
- Add new AC Breaker in the existing PPC (cabinet)
- Add conduit for power routed to SSC (cabinet)
- Add new Intersect CAM-Lock Generator connector to PPC
- Add (4) HCS Cables
- Add (3) Antenna Mounts (1) per sector
- Add New antenna standoffs
- Add (9) Antennas, (3) per sector
- Add (9) Radio Modules stacked, (3) per sector

Criteria For Approval. The criteria for review and potential approval of a permitted use request is found in Section 9-5-070(E) of the DCMC. This section depicts the standard of review for such requests as:

- E. Approval Standards: The following standards shall apply to the issuance of a permitted use permit. A permitted use shall:
1. Be allowed as a permitted use in the applicable zone;
 2. Conform to development standards of the applicable zone;
 3. Conform to applicable regulations of general applicability and regulations for specific uses set forth in this title;
 4. Not be located on any land classified as a primary or secondary conservation area or sensitive land area, except as expressly permitted by provisions of this title;
 5. Not be located in any protected area as shown on a natural resource inventory; and
 6. Conform to any other applicable requirements of this code.

REVIEWS

Planning Division Review. The Draper City Planning Division has completed their review of the Permitted Use Permit submission. Comments from this division, if any, can be found in Exhibit A.

Engineering and Public Works Divisions Review. The Draper City Engineering and Public Works Divisions have completed their reviews of the Permitted Use Permit submission. Comments from these divisions, if any, can be found in Exhibit A.

Building Division Review. The Draper City Building Division has completed their review of the Permitted Use Permit submission. Comments from this division, if any, can be found in Exhibit A.

Fire Division Review. The Draper City Fire Marshal has completed his review of the Permitted Use Permit submission. Comments from this division, if any, can be found in Exhibit A.

Noticing. Notice has been properly issued in the manner outlined in the City and State Codes.

STAFF RECOMMENDATION

Staff finds that the application complies with the DCMC and recommends that the Zoning Administrator review the request, and approve the application based on the findings listed below and the criteria for approval, as listed within the staff report.

If the Planning Commission decides to approve the request, staff recommends they include the following conditions of approval:

1. That all requirements of the Draper City Engineering, Public Works, Building, Planning, and Fire Divisions are satisfied throughout the development of the site and the construction of all buildings on the site, including permitting.
2. That the proposed changes to the site are compliant with Section 9-41-050 of the DCMC.
3. The applicant shall obtain all applicable permits from Draper City Fire and the Building Division, as required.

The findings for approval as are follows:

1. The application is allowed as a permitted use in the applicable zone;
2. The application conforms to development standards of the applicable zone;
3. The application conforms to applicable regulations of general applicability and regulations for specific uses set forth in Title 9 of DCMC;
4. The application is located on land classified as sensitive land area, but has been permitted with the initial approval of the water tower.
5. The land is not located in any protected area as shown on a natural resource inventory; and
6. The application conforms to all applicable requirements of Title 9 of DCMC.

DEVELOPMENT REVIEW COMMITTEE ACKNOWLEDGEMENT

We, the undersigned, as duly appointed members of the Draper City Development Review Committee, do acknowledge that the application which provides the subject for this staff report has been reviewed by the Committee and has been found to be appropriate for review by the Draper City Planning Commission and/or City Council.

Brien Maxfield

Digitally signed by Brien Maxfield
DN: cn=Brien Maxfield, o=Draper City,
ou=PW - Engineering,
email=brien.maxfield@draperutah.gov, c=US
Date: 2021.07.22 16:51:49 -06'00'

Draper City Public Works Department

Don Buckley

Digitally signed by Don Buckley
DN: C=US, E=don.buckley@draper.ut.us,
O=Draper City Fire Department, OU=Fire
Marshal, CN=Don Buckley
Date: 2021.07.22 16:49:13-06'00'

Draper City Fire Department

Matthew T. Symes

Digitally signed by Matthew T. Symes
DN: C=US, E=Matt.symes@draper.ut.us,
O=Draper City, CN=Matthew T. Symes
Date: 2021.07.26 11:55:04-06'00'

Draper City Building Division

Jennifer Jastremsky

Digitally signed by Jennifer Jastremsky
DN: C=US, E=jennifer.jastremsky@draperutah.gov,
O=Planning Division, OU=Draper City, CN=Jennifer
Jastremsky
Date: 2021.07.22 16:46:48-06'00'

Draper City Planning Division

Mike Barker

Digitally signed by Mike Barker
Date: 2021.07.22 17:08:54
-06'00'

Draper City Legal Counsel

EXHIBIT A DEPARTMENT REVIEWS

REVIEWS ARE NOT MEANT TO BE AN ALL INCLUSIVE LIST OF POSSIBLE COMMENTS OR CONDITIONS.

Planning Division Review.

1. No Comments.

Fire Division Review.

1. 2A-10BC Fire Extinguishers required. The extinguisher needs to be a serviceable type meaning metal head and metal neck. Extinguishers need to be located in a conspicuous location where they will be readily accessible and immediately available for use. Placed on every level of the home. If in cabinet or not the extinguisher or cabinet needs to be mounted so that the top is not more than five (5) feet above the floor.
2. Fire Department Access is required to be maintained. Vehicles cannot park in such a way to impede fire department or emergency vehicle access.
3. Hazardous Material Permit – A Draper City Fire Hazardous Material Permit may need to be obtained. This is for all new and existing installations.

Note: Plan approval or review shall not be construed to relieve from or lessen the responsibility of any person designing, owning, operating or controlling any building. Damages to persons or property defects, fire, improper installation, or other emergency conditions that occur in or on the building property shall not hold the Draper City Fire Department as assuming any liability.

**EXHIBIT B
AERIAL MAP**

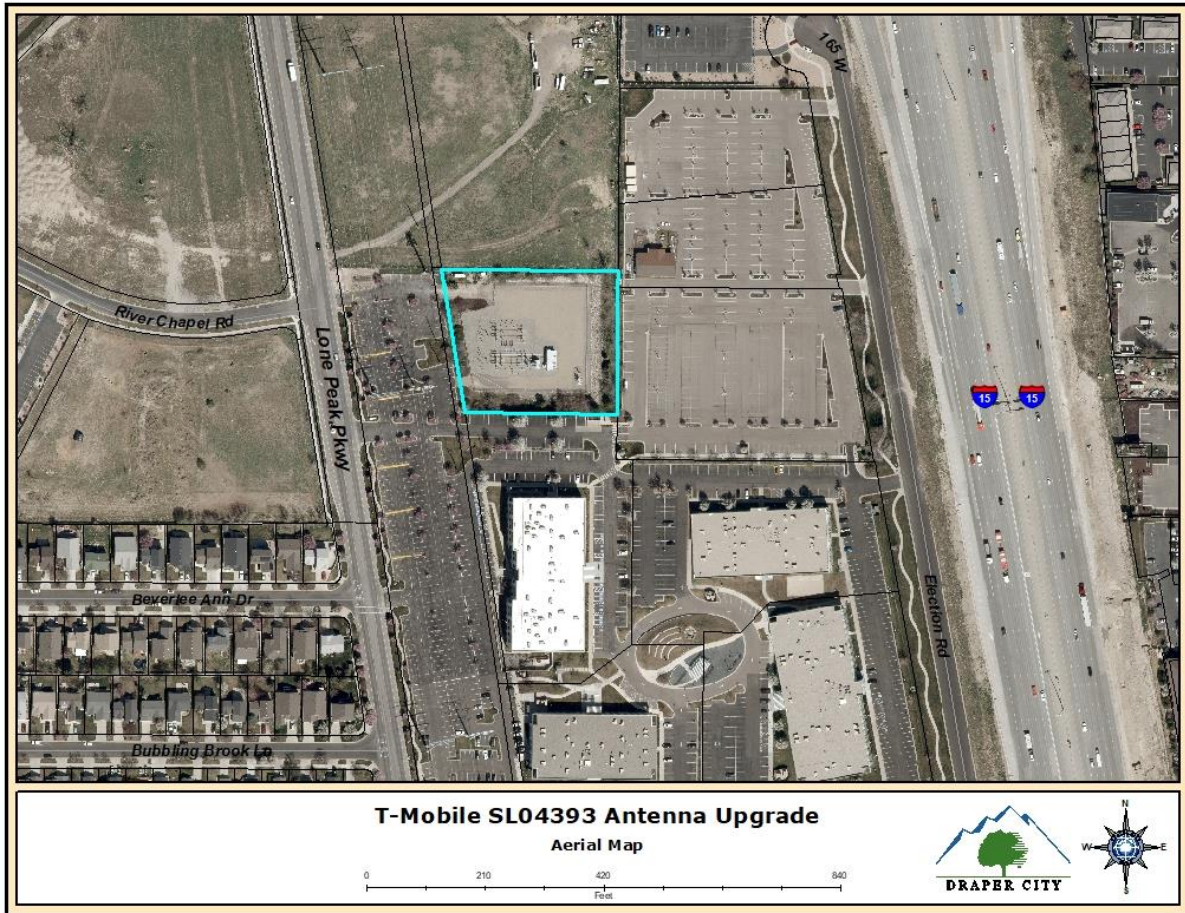


EXHIBIT C LAND USE MAP

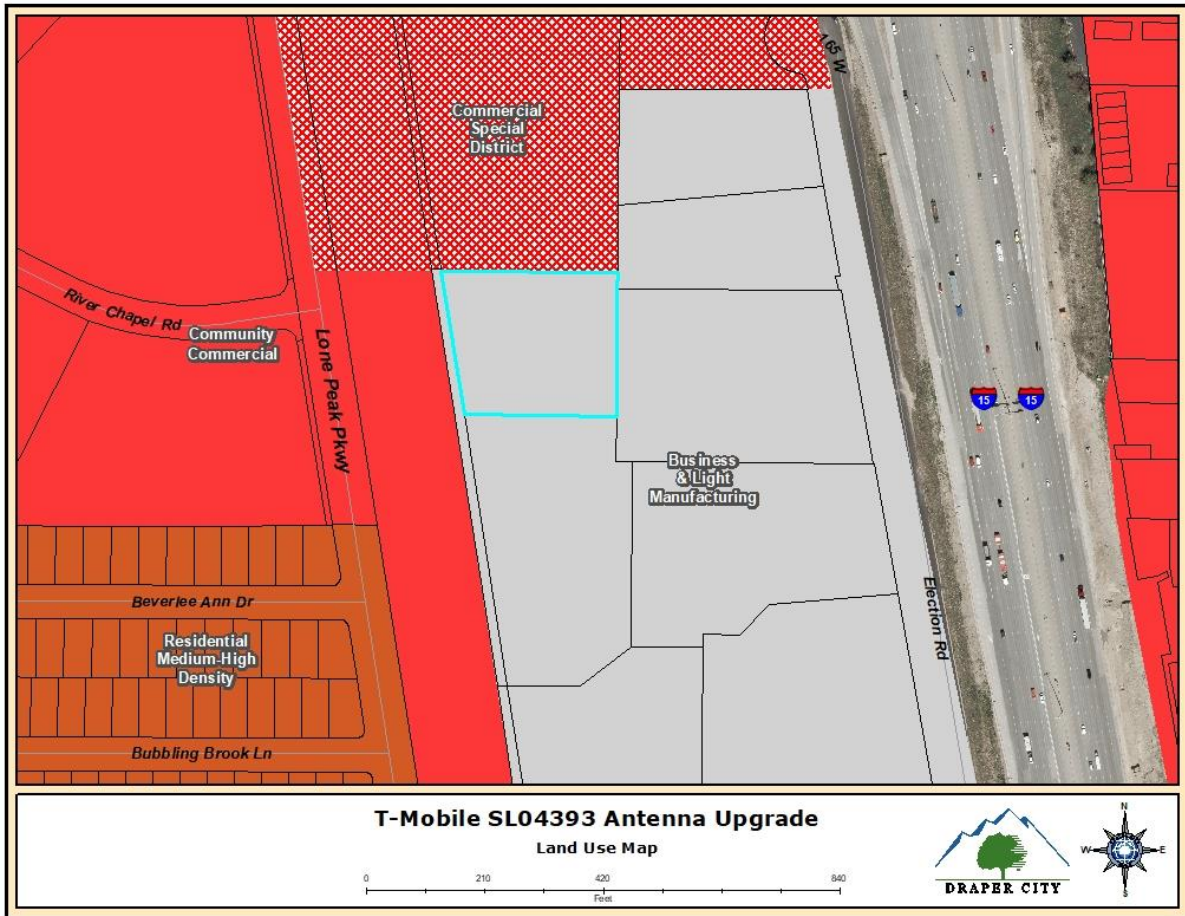


EXHIBIT D
ZONING MAP

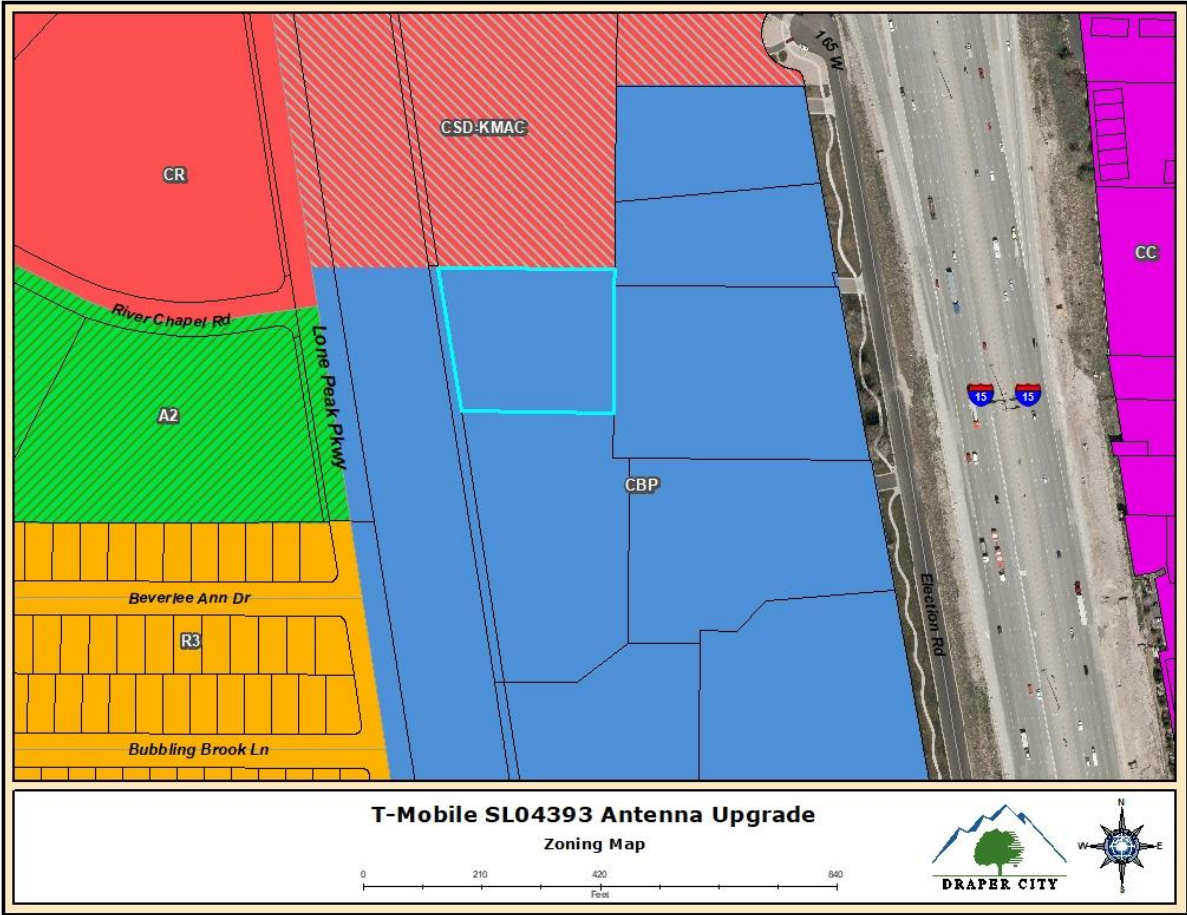


EXHIBIT E
DRAWINGS



SITE #: SL04393A (SL40XC029)
SITE NAME: PAC BUSINESS PARK
STATE: UTAH
COUNTY: SALT LAKE COUNTY
DESIGN TYPE: SPRINT RETAIN

CLIENT

CONSULTANT

COAL CREEK CONSULTING
2166 E. UNIVERSITY DR., STE 201
TEMPE, ARIZONA 85281
PHONE: (602) 429-0533 FAX: (480) 638-2852

ENGINEER OF RECORD

TERRA DYNAMIC ENGINEERING, LLC
P.O. BOX 22131, PHOENIX, AZ 85028
PHONE: (602) 482-1603
EMAIL: ROBERT@TERRADYNAMIC.US

SEAL

| CODE COMPLIANCE: | |
|--|--|
| ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE CODES ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THE CODES. | |
| ACCESSIBILITY REQUIREMENTS: | |
| THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE CURRENT INTERNATIONAL BUILDING CODE. | |
| ENGINEERS NOTES: | |
| <div>1. IF A DISCREPANCY ARISES BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR WHERE A DETAIL IS DOUBTFUL OF INTERPRETATION, OR AN UNANTICIPATED FIELD CONDITION IS ENCOUNTERED, THE ENGINEER SHALL BE CALLED IMMEDIATELY FOR PROCEDURE TO BE FOLLOWED. SUCH INSTRUCTIONS SHALL BE CONFIRMED IN WRITING AND DISTRIBUTED TO ALL AFFECTED PARTIES.</div> <div>2. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DRAWING AND/OR DOCUMENTS.</div> <div>3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER LAYOUT OF IMPROVEMENTS BASED UPON SETBACKS/ PROPERTY LINE LOCATION. DIMENSIONAL RELATIONSHIPS TO EQUIPMENT ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.</div> <div>4. CONTRACTOR TO MAINTAIN ALL DRAINAGE PATHS FREE FROM ANY OBSTRUCTIONS (I.E. DEBRIS AND SILT).</div> <div>5. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM EQUIPMENT.</div> <div>6. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND ENGINEER OF RECORD.</div> <div>7. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. ROUTING OF TRENCHING SHALL BE APPROVED BY CONTRACTOR</div> | |
| UTILITY NOTES: | |
| <div>1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT BLUESTAKE AT LEAST TWO FULL WORKING DAYS (48 HOURS) PRIOR TO BEGINNING OF ANY EXCAVATING.</div> <div>2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL STRUCTURES, UNDERGROUND PIPELINES, ELECTRIC AND TELEPHONE CONDUITS, EITHER SHOWN OR NOT SHOWN ON THE PLANS PRIOR TO ANY CONSTRUCTION, AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO THESE FACILITIES. THE ENGINEERING AND/OR DEVELOPER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.</div> <div>3. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL UTILITY CONNECTIONS.</div> | |

| PROJECT SUMMARY | |
|--|--|
| <div>SITE ADDRESS: 11778 LOAN PEAK PKWY DRAPER, UTAH 84020</div> <div>PROPERTY OWNER: UTAH POWER & LIGHT COMPANY 189 W. 11400 S.</div> | |
| <div>PARCEL: 27-24-452-001</div> <div>ZONING CLASSIFICATION: CBP</div> <div>JURISDICTION: SALT LAKE CITY</div> <div>LAT: 40.53975833</div> <div>LONG: -111.89723611</div> <div>GROUND ELEVATION: 4432' AMSL</div> | |
| PROJECT DESCRIPTION | |
| T-MOBILE PROPOSES TO: | |
| REMOVE AC BREAKERS IN PPC REMOVE (2) EQUIPMENT CABINETS REMOVE (6) ANTENNAS, (2) PER SECTOR REMOVE (6) RADIO MODULES (2) PER SECTOR REMOVE EXISTING HYBRID CABLES REMOVE ANTENNA MOUNTS ADD A NEW AC BREAKER IN EXISTING PPC ADD CONDUIT FOR POWER ROUTED TO SSC ADD A NEW INTERSECT CAM-LOCK GENERATOR CONNECTOR TO PPC ADD (4) HCS CABLES ADD (3) ANTENNA MOUNTS (1) PER SECTOR ADD (3) NEW ANTENNA STANDOFFS ADD (9) ANTENNAS, (3) PER SECTOR ADD (9) RADIO MODULES STACKED (3) PER SECTOR | |

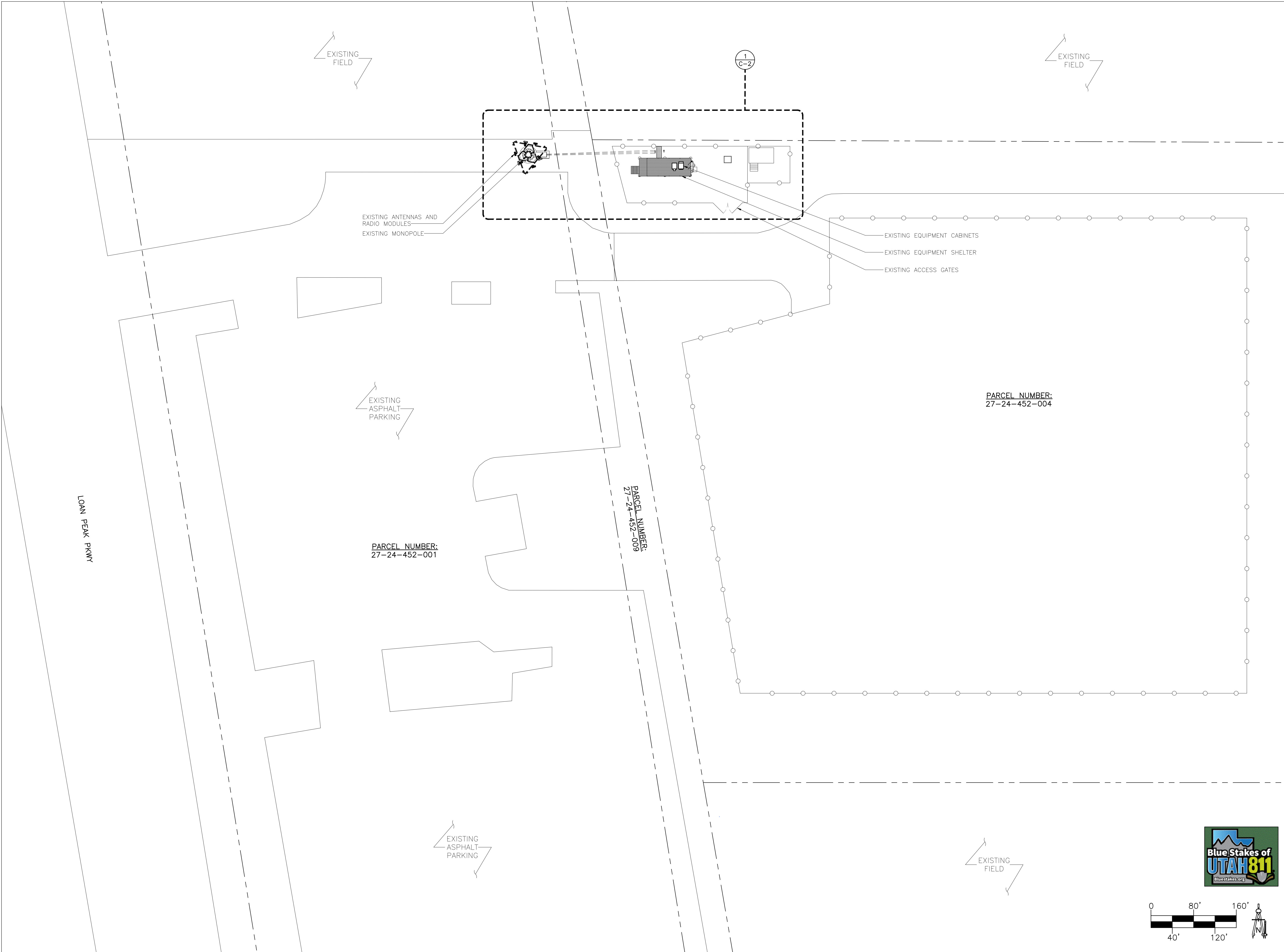
| PROJECT TEAM | |
|---|--|
| <div>PROJECT MANAGER: SPRINT 121 ELECTION RD. DRAPER, UTAH 84020 CONTACT: LANE FISHBURN PHONE: (801) 807-9071 EMAIL: LANE.FISHBURN@T-MOBILE.COM</div> <div>CONSTRUCTION MANAGER: COAL CREEK CONSULTING 2166 E. UNIVERSITY DR., STE 201 TEMPE, AZ 85281 CONTACT: IAN WALKER PHONE (801) 946-8585</div> <div>SITE ACQ. CONSULTANT: COAL CREEK CONSULTING 2166 E. UNIVERSITY DR., STE 201 TEMPE, ARIZONA 85281 CONTACT: STEVE CIOLEK PHONE: (480) 246-4131</div> <div>A&E DESIGN: COAL CREEK CONSULTING 2166 E. UNIVERSITY DR., STE 201 TEMPE, AZ 85281 CONTACT: SHAWN EVANS PHONE (602) 758-5829</div> <div>CIVIL ENGINEER: TERRA DYNAMIC ENGINEERING, LLC P.O. BOX 22131 PHOENIX, ARIZONA 85028 CONTACT: ROBERT ORLANDO PHONE (602) 482-1603 EMAIL:ROBERT@TERRADYNAMIC.US</div> <div>ELECTRICAL ENGINEER: EXCELLENCE IN ENGINEERING 12005 ANTELOPE TRAIL PARKER, COLORADO 80138 CONTACT: LOREN PRIEST PHONE (303) 748-1189</div> | |

| SHEET INDEX | |
|-------------|--|
| T-1 | TITLE SHEET, VICINITY MAP & GENERAL INFO. |
| CIVIL: | SITE PLAN ENLARGED SITE PLAN EXISTING/NEW ANTENNA AND EQUIPMENT PLAN EXISTING/NEW ELEVATION DETAILS |
| ELECTRICAL | SPECS/GENERAL NOTES/LEGENDS/SHEET INDEX ENLARGED POWER PLAN ONE-LINE AND EXISTING/NEW PANEL SCHEDULE EQUIPMENT/ANTENNA GROUNDING PLAN AND NOTES |

| VICINITY MAP | |
|--------------|--|
| | |

| DRIVING DIRECTIONS | |
|--|--|
| DIRECTIONS TO THE SITE FROM THE T-MOBILE OFFICE: TURN LEFT ON TO S. ELECTION RD., TURN RIGHT ON TO LOAN PEAK PKWY. AT THE FOURTH RIGHT HAND PARKING LOT ENTRANCE, TURN RIGHT, SITE AT END | |

| NO. | DATE | DESCRIPTION | BY |
|---|----------|-------------|-----|
| 1 | 02/19/21 | REVIEW | REW |
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| PROJECT INFORMATION | | | |
| JOB: 13-106-04 | | | |
| SL04393A (SL40XC029) PAC BUSINESS PARK 11778 LOAN PEAK PKWY DRAPER, UTAH 84020 | | | |
| SHEET TITLE | | | |
| TITLE SHEET, VICINITY MAP & GENERAL INFORMATION | | | |
| JURISDICTIONAL APPROVAL | | | |
| SHEET NUMBER | | | |
| T-1 | | | |



CLIENT



CONSULTANT



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ENGINEER OF RECORD
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SEAL



| NO. | DATE | DESCRIPTION | BY |
|-----|----------|-------------|-----|
| 1 | 02/19/21 | REVIEW | REW |
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PROJECT INFORMATION
JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS
PARK

11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

SHEET TITLE

SITE PLAN

JURISDICTIONAL APPROVAL

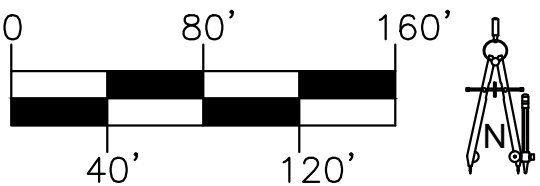
SHEET NUMBER

C-1

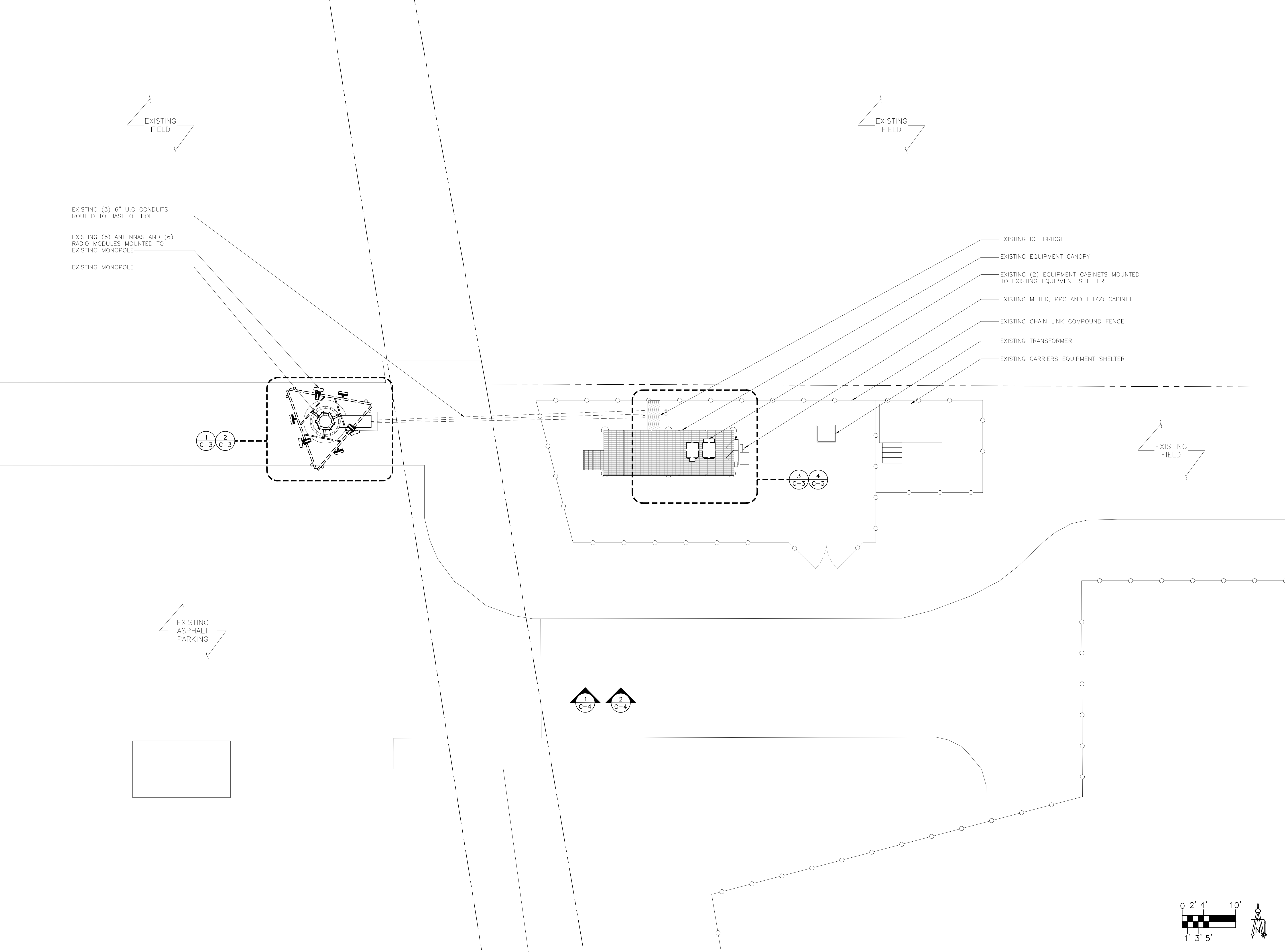
SITE PLAN

SCALE: 1" = 80'

1



RFDS VER: 1 DATED 2/9/2021 3:12:36PM



CLIENT



CONSULTANT



2166 E. UNIVERSITY DR., STE 201
TEMPE, ARIZONA 85281
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ENGINEER OF RECORD



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SEAL

PRELIMINARY NOT
FOR CONSTRUCTION
OR RECORDATION

| NO. | DATE | DESCRIPTION | BY |
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| 1 | 02/19/21 | REVIEW | REW |
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PROJECT INFORMATION

JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS
PARK

11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

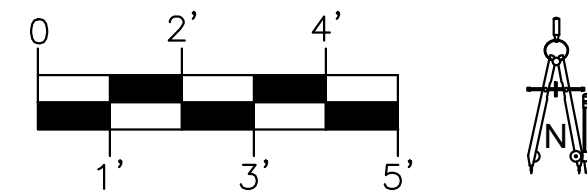
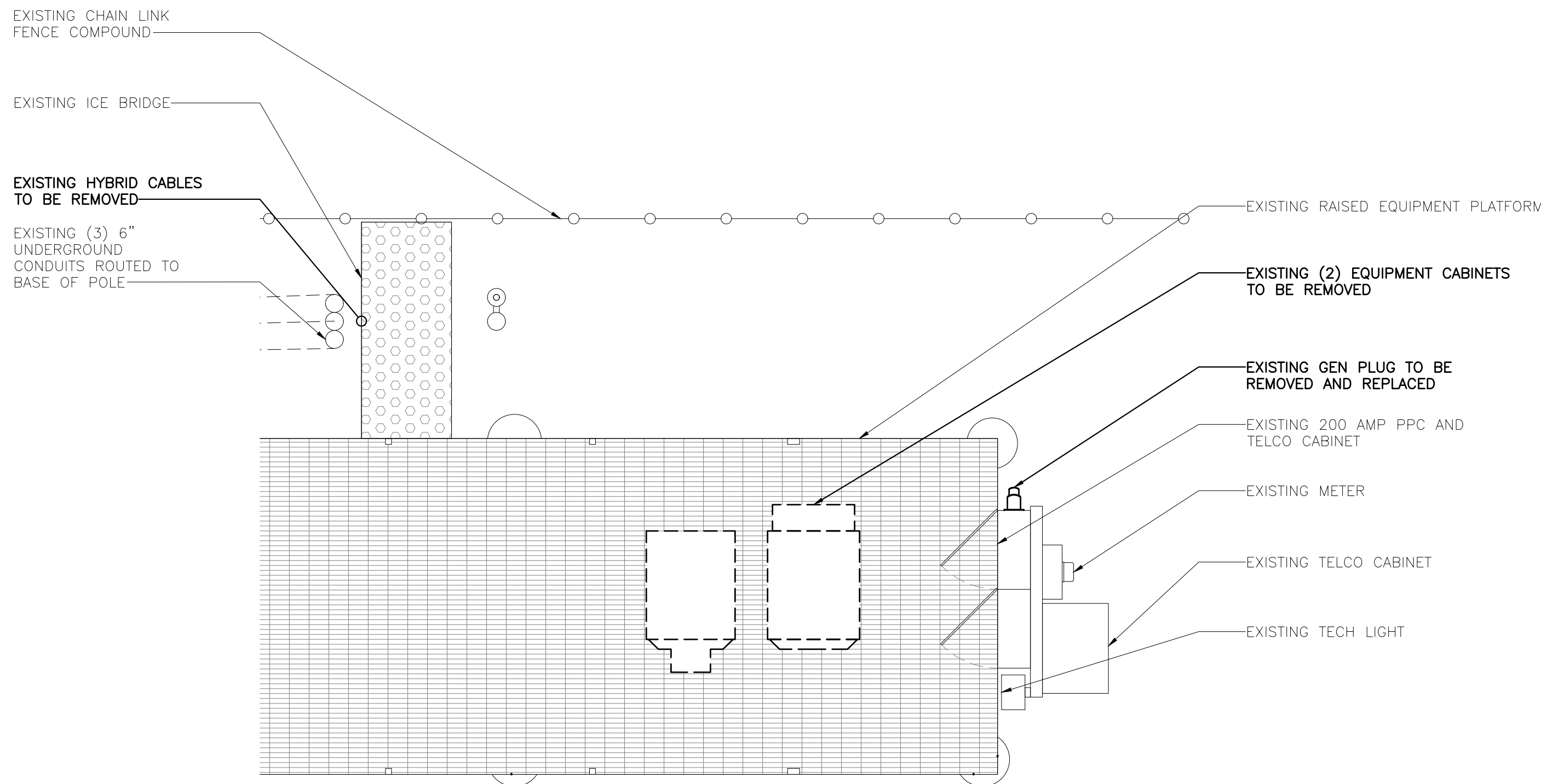
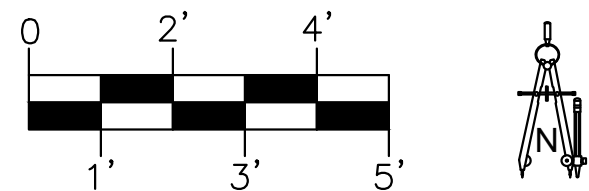
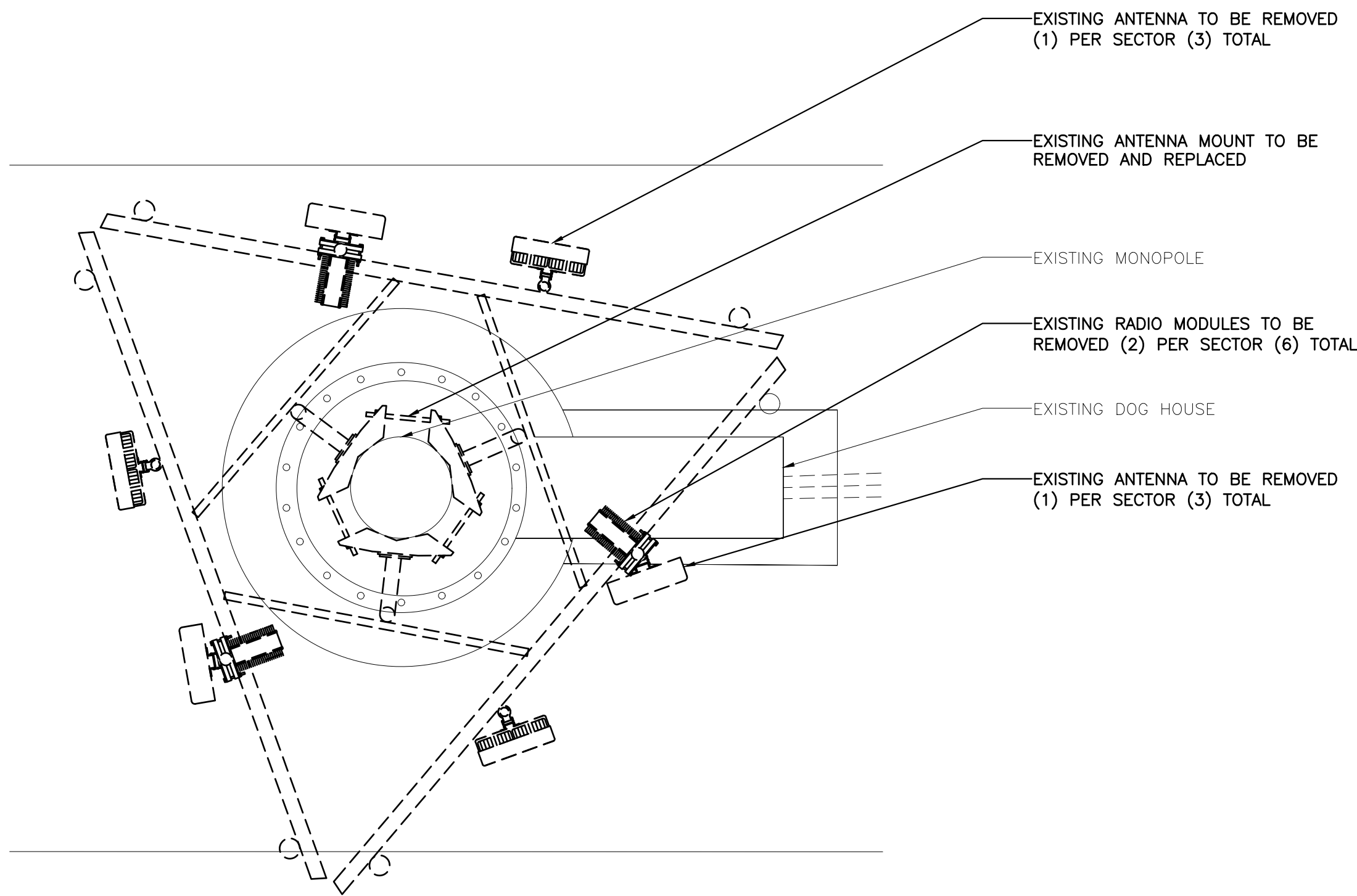
SHEET TITLE

ENLARGED SITE PLAN

JURISDICTIONAL APPROVAL

SHEET NUMBER

C-2



EXISTING ANTENNA PLAN

SCALE: 3/8" = 1'-0"

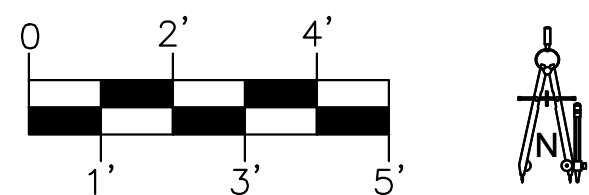
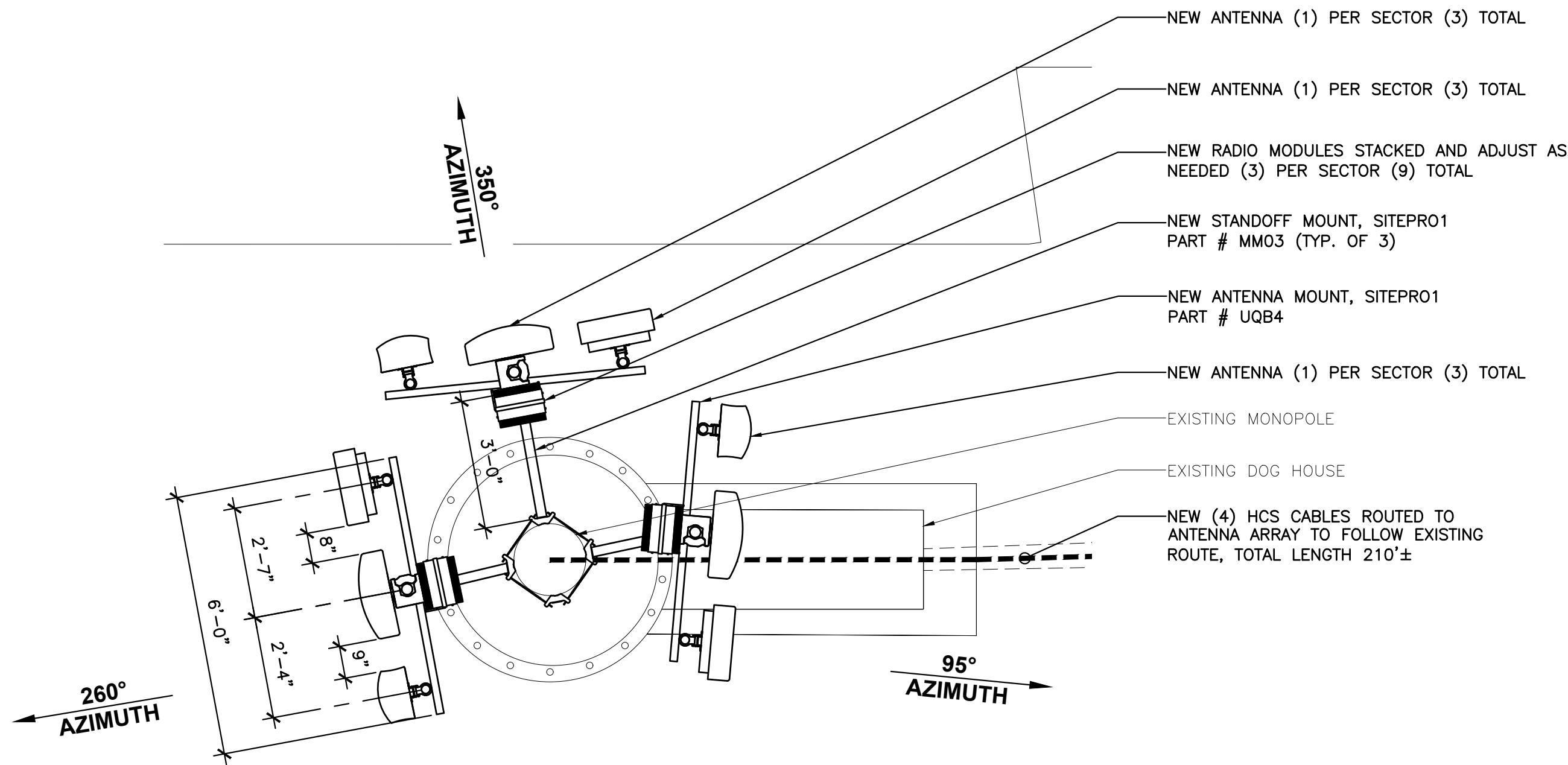
3

EXISTING EQUIPMENT PLAN

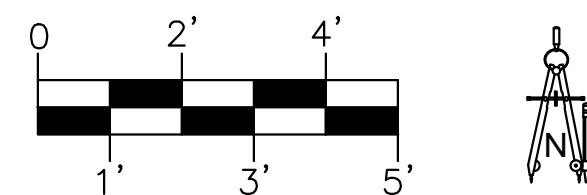
SCALE: 3/8"=1'-0"

1

NOTES:
STRUCTURAL ANALYSIS MUST BE PERFORMED
BEFORE INSTALLATION OF ANY NEW ANTENNAS.
STRUCTURAL ANALYSIS PROVIDED BY OTHERS.



NEW EQUIPMENT PLAN



NEW ANTENNA PLAN

SCALE: 3/8" = 1'-0"

4

NEW EQUIPMENT PLAN

SCALE: 3/8"=1'-0"

2

CLIENT

Sprint

CONSULTANT

COAL CREEK CONSULTING

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ENGINEER OF RECORD
TERRA DYNAMIC ENGINEERING, LLC

TDE

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SEAL

PRELIMINARY NOT
FOR CONSTRUCTION
OR RECORDATION

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| 1 | 02/19/21 | REVIEW | REW |
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| | | | |

PROJECT INFORMATION

JOB: 13-106-04

**SL04393A
(SL40XC029)
PAC BUSINESS
PARK**

11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

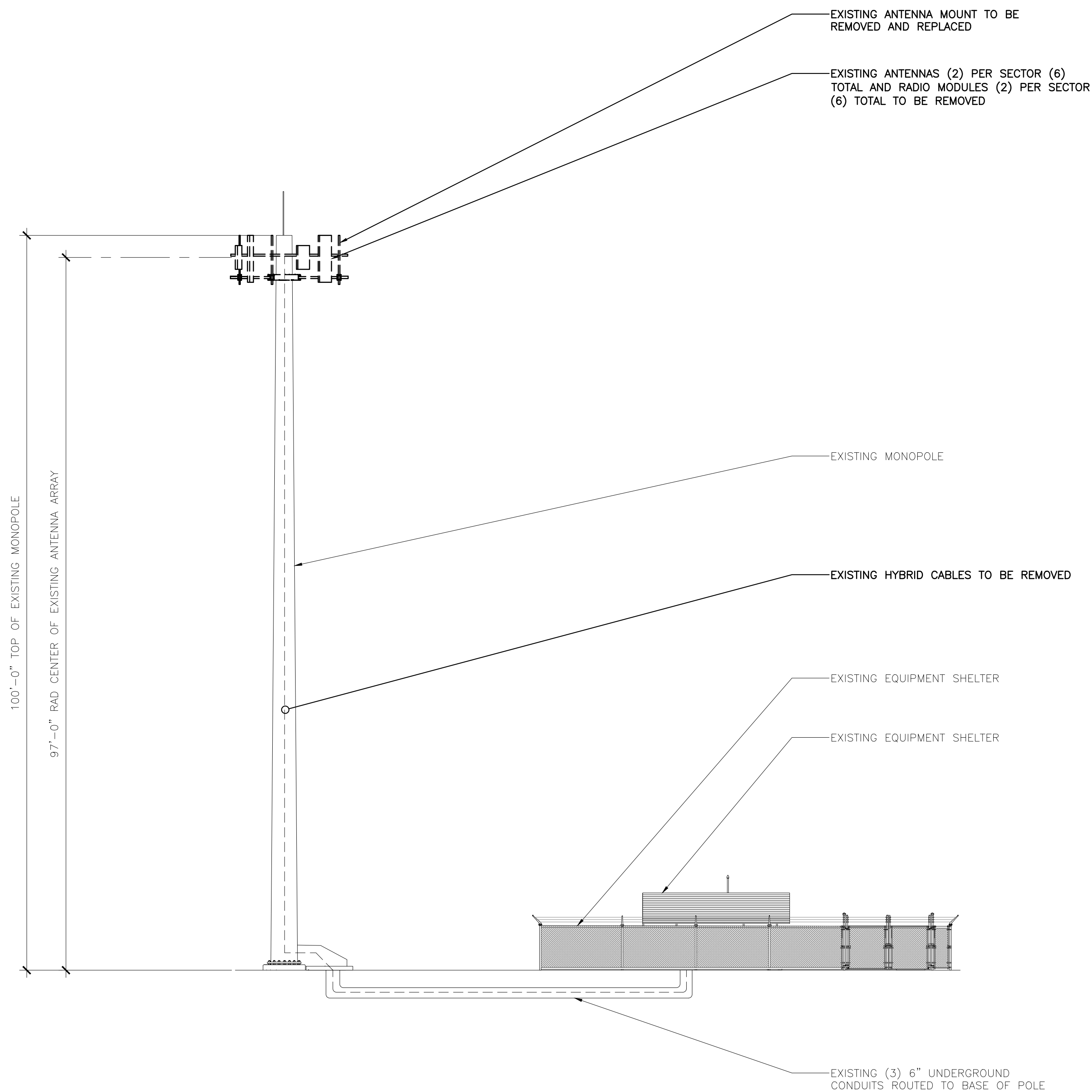
SHEET TITLE

**EXISTING/NEW
EQUIPMENT AND
ANTENNA PLAN**

JURISDICTIONAL APPROVAL

SHEET NUMBER

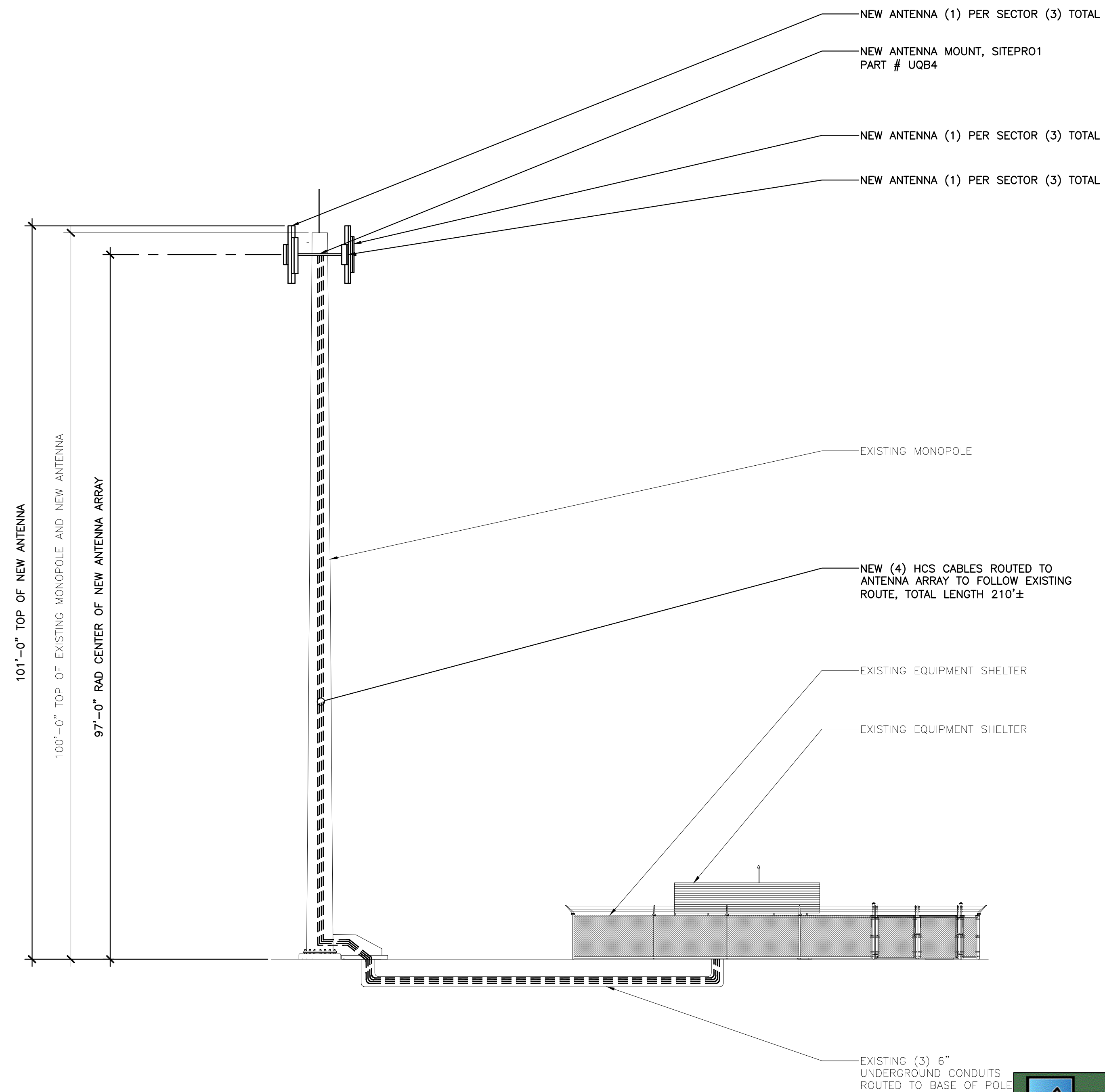
C-3



EXISTING NORTH ELEVATION

SCALE: 3/32" = 1'-0"

2



NEW NORTH ELEVATION

SCALE: 3/32" = 1'-0"

1

NOTES:
STRUCTURAL ANALYSIS MUST BE PERFORMED
BEFORE INSTALLATION OF ANY NEW ANTENNAS.
STRUCTURAL ANALYSIS PROVIDED BY OTHERS.

— CLIENT —



— CONSULTANT —

COAL CREEK

CONSULTING

2166 E. UNIVERSITY DR., STE 201
TEMPE, ARIZONA 85281
PHONE: (602) 429-0533 FAX: (480) 638-2852

—ENGINEER OF RECORD—

TERRA DYNAMIC ENGINEERING, LLC



P.O. BOX 22131, PHOENIX, AZ 85028
PHONE: (602) 482-1603
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—SEAL—

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2-36PM

PROJECT INFORMATION

JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS
PARK

11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

—SHEET TITLE—

EXISTING/NEW ELEVATIONS

—JURISDICTIONAL APPROVAL—


—SHEET NUMBER—

C-4


RFDS VER: 1 DATED 2/9/2021 3:12:36PM

| ANTENNA AND CABLE SCHEDULE | | | | | | | | | | |
|----------------------------|----------------|--|---------------|---------|-------------------------|-------------------------|------------------------|---------------|--------|--|
| SECTOR | ANT. POS. # | ANTENNA TYPE | RAD CENTER | AZIMUTH | MECHANICAL DOWN TILT | ELECTRICAL DOWN TILT | CABLE TYPE | # OF LINES | LENGTH | RADIO |
| ALPHA | 1 | ERICSSON-AIR32 KRD901146-1_B66_B2A (OCTO) | 97'± | 350° | 0 | 2 | | | | |
| ALPHA | 2 | RFS-APXVAA4L24_43-U-NA20 (DoDeca) | 97'± | 350° | 0 | 4 AND 2 | HYBRID CABLE 6/24 4AWG | 2 | 210'± | ERICSSON-4449-B71+B85 ERICSSON-4415-B66A ERICSSON-4415-B25 |
| ALPHA | 3 | ERICSSON-AIR6449 B41 (MIMO) | 97'± | 350° | 0 | 2 | | | | |
| BETA | 1 | ERICSSON-AIR32 KRD901146-1_B66_B2A (OCTO) | 97'± | 95° | 0 | 2 | | | | |
| BETA | 2 | RFS-APXVAA4L24_43-U-NA20 (DoDeca) | 97'± | 95° | 0 | 4 AND 2 | HYBRID CABLE 6/24 4AWG | 1 | 210'± | ERICSSON-4449-B71+B85 ERICSSON-4415-B66A ERICSSON-4415-B25 |
| BETA | 3 | ERICSSON-AIR6449 B41 (MIMO) | 97'± | 95° | 0 | 2 | | | | |
| GAMMA | 1 | ERICSSON-AIR32 KRD901146-1_B66_B2A (OCTO) | 97'± | 260° | 0 | 2 | | | | |
| GAMMA | 2 | RFS-APXVAA4L24_43-U-NA20 (DoDeca) | 97'± | 260° | 0 | 4 AND 2 | HYBRID CABLE 6/24 4AWG | 1 | 210'± | ERICSSON-4449-B71+B85 ERICSSON-4415-B66A ERICSSON-4415-B25 |
| GAMMA | 3 | ERICSSON-AIR6449 B41 (MIMO) | 97'± | 260° | 0 | 2 | | | | |

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SEAL



| NO. | DATE | DESCRIPTION | BY |
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| 1 | 02/19/21 | REVIEW | REW |
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| | | | |

PROJECT INFORMATION

JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS PARK
11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

SHEET TITLE

DETAILS

JURISDICTIONAL APPROVAL

SHEET NUMBER

C-5

| | | |
|------------------|------------------|---|
| ANTENNA SCHEDULE | SCALE: N.T.S | 1 |
| NOT USED | SCALE: N.T.S. | 2 |

RFDS VER: 1 DATED 2/9/2021 3:12:36PM

ELECTRICAL SPECIFICATIONS

- 1 SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- 2 CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- 3 HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
- 4 THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
- 5 EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
- 6 CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- 7 ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA & NBFU.
- 8 CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
- 9 CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS
- 10 COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- 11 ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
- 12 PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- 13 ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
- 14 USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
- 15 ALL CONDUCTORS SHALL BE COPPER.
- 16 ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- 17 THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES AND DRAWINGS.
- 18 PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- 19 IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
- 20 LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
- 21 PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH SECTION NO. 4305 AND NO. 4304 OF THE U.B.C.
- 22 RECEPTACLES SHALL BE 20 AMPERE, 125 VOLT A.C., WHITE AS REQUIRED BY THE ARCHITECT OR APPROVED EQUAL.
- 23 WALL SWITCHES SHALL BE SINGLE-POLE, HUBBELL #1201 OR EQUIVELENT, WHITE AS REQUIRED BY THE ARCHITECT.
- 24 PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS, SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE RACO #800, 1/2" RAISED WORK COVERS.
- 25 WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM, NO BX OR ROMEX CABLE IS PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS.
- 26 GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER AND ANNEALED #2.
- 27 GROUND RODS SHALL BE COPPER CLAD STEEL, 5/8" ROUND AND 10' LONG, COPPERWELD OR APPROVED EQUAL.
- 28 METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS. MANUFACTURED BY SQUARE D COMPANY OR APPROVED EQUAL.
- 29 ALL MATERIALS SHALL BE U.L. LISTED.
- 30 CONDUIT:
a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR RIGIDCONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
c. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.
d. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 24" BELOW GRADE.
- 31 ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- 32 UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- 33 CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.

GENERAL ELECTRICAL NOTES

1. CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE EXACT ROUTING REQUIRED. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF INSTALLATION.
2. ALL EQUIPMENT PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION.
3. DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL PLANS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL PLANS OR DIMENSIONED ON THE ELECTRICAL PLANS, VERIFY EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL WIRE COUNTS ARE TYPICALLY NOT SHOWN BETWEEN LIGHT FIXTURES OR RECEPTACLES. PROVIDE ALL REQUIRED EVEN WHERE NOT SHOWN.
5. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, CIRCUITS SHALL CONSIST OF #12 PHASE AND GROUNDED (NEUTRAL CONDUCTORS) AND A #12 CU GROUND IN 3/4" CONDUIT. MC CABLE SHALL BE ACCEPTABLE IN WALLS. ALL BRANCH CIRCUIT HOME-RUNS SHALL BE IN CONDUIT.
6. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD.
7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.
8. INSULATION & WIRE TYPES SHALL BE AS FOLLOWED: PANEL FEEDERS - XHHW COPPER, WIRING ABOVE GRADE - THIN COPPER, WIRING BELOW GRADE - THIN COPPER, UNLESS NOTED OTHERWISE.
9. SOME CONDUCTOR SIZES ARE BASED ON THE USE OF 75 DEGREE C CONDUCTOR RATINGS. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THAT ALL ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
10. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. COMPONENTS NOT SHOWN, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE PROJECT.
11. THE CONTRACTOR SHALL PERFORM ALL ACCEPTANCE TESTS REQUIRED OR RECOMMENDED BY EQUIPMENT MANUFACTURERS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SEVEN (7) DAYS PRIOR TO TESTING AND SHALL ALLOW OBSERVATION OF THE TESTING BY THE ENGINEER.
12. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED.
13. UNLESS OTHERWISE NOTED, ALL EQUIPMENT DISCONNECTS SHALL BE NEMA TYPE 3R, FUSIBLE, 30A, 3 POLE. FUSE PER EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
14. ALL PENETRATIONS IN WALLS SHALL BE SEALED WITH FLEXIBLE ACOUSTIC CAULKING. CAULKING SHALL BE APPLIED AROUND OUTLET BOXES TO PROVIDE A COMPLETE SEAL BETWEEN THE BOX AND THE WALL.
15. PRIOR TO TRENCING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA, CABLE TV, GAS, AND WATER UTILITY PROVIDERS (BLUE STAKE) AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. IN ADDITION, THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A SUBCONTRACTOR SPECIALIZING IN THE LOCATION OF UNDERGROUND STRUCTURES TO IDENTIFY ANY OBSTACLES IN THE PATH OF TRENCING (PRIOR TO COMMENCING WORK). DAMAGE TO ANY UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
16. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODES INCLUDING THE NEC
17. OVER CURRENT DEVICES SHALL BE LOCATED WHERE THEY WILL NOT BE EXPOSED TO PHYSICAL DAMAGE.
18. HOMERUNS SHALL NOT BE GANGED TOGETHER UNLESS SHOWN GANGED.
19. CONTRACTOR SHALL CONTACT ENGINEER IN WRITING (RFI) PRIOR TO PROCEEDING WITH ANY WORK NOT CLEARLY SHOWN ON THESE CONTRACT DOCUMENTS. ENGINEER WILL NOT ACCEPT ANY RESPONSIBILITY FOR WORK HE HAS NOT EXPLICITLY AUTHORIZED.
20. PROVIDE IDENTIFICATION AT THE DISTRIBUTION PANEL FOR BRANCH CIRCUITS THAT FEED EMERGENCY LIGHTING UNIT EQUIPMENT.
21. ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE MAINTENANCE WHILE ENERGIZED SHALL BE PROPERLY MARKED TO WARN PERSONNEL OF ARC FLASH HAZARD.
22. PROVIDE A #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO THE NON-METALLIC CABLE, PIPE OR CONDUIT AT 8"-0" ON CENTER. IT SHALL HAVE A 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT ANY ABOVE GRADE TERMINATION PER ARIZONA STATE STATUTE.
23. UTILITY COORDINATION
a. THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF DRAWINGS TO ELECTRICAL AND TELCO UTILITIES AS REQUIRED FOR DESIGN.
b. THE CONTRACTOR SHALL NOT TRENCH OR INSTALL CONDUITS (ON THE UTILITY OR LOAD SIDE) TO THE SES OR TO THE UTILITY TRANSFORMER (PRIMARY OR SECONDARY), OR TO THE UTILITY CONNECTION POINT BEFORE RECEIVING A FINAL DESIGN FROM THE UTILITY.
c. THE CONTRACTOR SHALL NOT INSTALL EQUIPMENT PADS FOR THE SES OR ANY UTILITY EQUIPMENT (TRANSFORMERS, SWITCHING CABINETS, ETC) PRIOR TO RECEIPT OF FINAL PLANS FROM THE UTILITY.
d. THE CONTRACTOR SHALL NOT BE COMPENSATED FOR ADDITIONAL WORK REQUIRED TO MEET THE REQUIREMENTS OF THE UTILITY WHICH IS THE RESULT OF PROCEEDING PRIOR TO RECEIPT OF A FINAL UTILITY DESIGN.
24. SERIES RATING NOTES:
A. WHERE A CIRCUIT BREAKER IS USED ON A CIRCUIT HAVING AN AVAILABLE FAULT CURRENT HIGHER THAN THE MARKED INTERRUPTING RATING BY BEING CONNECTED ON THE LOAD SIDE OF AN ACCEPTABLE OVERCURRENT PROTECTIVE DEVICE HAVING A HIGHER RATING, THE CIRCUIT BREAKER SHALL MEET THE REQUIREMENTS SPECIFIED IN (1) AND (2).
(1). TESTED COMBINATIONS. THE COMBINATION OF LINE-SIDE OVERCURRENT DEVICE AND LOAD-SIDE CIRCUIT BREAKER(S) IS TESTED AND MARKED ON THE END USE EQUIPMENT, SUCH AS SWITCHBOARDS AND PANELBOARDS.
(2). MOTOR CONTRIBUTION. SERIES RATINGS SHALL NOT BE USED WHERE
a. MOTORS ARE CONNECTED ON THE LOAD SIDE OF THE HIGHER-RATED OVERCURRENT DEVICE AND ON THE LINE SIDE OF THE LOWER-RATED OVERCURRENT DEVICE, AND
b. THE SUM OF THE MOTOR FULL-LOAD CURRENTS EXCEEDS 1 PERCENT OF THE INTERRUPTING RATING OF THE LOWER-RATED CIRCUIT BREAKER.
- B. WHERE CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. THE MARKING SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:
CAUTION - SERIES COMBINATION SYSTEM RATED _____ AMPERES.
IDENTIFIED REPLACEMENT COMPONENTS REQUIRED
- C. TESTED COMBINATIONS. THE COMBINATION OF THE LINE-SIDE OVERCURRENT DEVICE AND LOAD SIDE CIRCUIT BREAKER(S) IS TESTED AND MARKED ON THE END USE EQUIPMENT, SUCH AS SWITCHBOARDS AND PANELBOARDS.

SYMBOL LIST
(NOT ALL MAY BE USED)

ELECTRICAL SYMBOLS

FLUORESCENT STRIP FIXTURE, LENGTH PER PLAN.

SURFACE WALL-MOUNTED LIGHT FIXTURE.

SOLID 'J'BOX' ON ANY FIXTURE INDICATES A FIXTURE WITH AN INTEGRAL EMERGENCY POWER SUPPLY, PER THE SPECIFICATIONS.

POLE-MOUNTED LIGHT FIXTURE.

SINGLE POLE TOGGLE SWITCH

PHOTOCELL , MOUNTED ON ROOF UNLESS NOTED OTHERWISE.

DUPLEX CONVENIENCE RECEPTACLE

"CROSS SLASH" ON ANY RECEPTACLE INDICATES INTEGRAL GROUND FAULT PROTECTION.

DOUBLE DUPLEX (FOURPLEX) CONVENIENCE RECEPTACLE

JUNCTION BOX. 'C' INDICATES CEILING MOUNTED. 'T' INDICATES FLOOR MOUNTED (SUBSCRIPTS ARE TYPICAL FOR ALL DEVICES)

VOICE OUTLET

DATA OUTLET

COMBINATION TELEPHONE AND DATA OUTLET IN THE SAME BOX

HORSEPOWER RATED MANUAL MOTOR SWITCH

FUSIBLE DISCONNECT SWITCH FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE. SIZE AND FUSES AS PER RECOMMENDATIONS OF EQUIPMENT'S MANUFACTURER OR AS NOTED. (N. INDICATES NON-FUSED).

ELECTRICAL MOTOR. SEE DRAWINGS FOR SIZE.

DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER OR SERVICE ENTRANCE SECTION. SEE DRAWINGS FOR EXACT TYPE.

DISTRIBUTION TRANSFORMER

SURFACE MOUNTED PANEL BOARD.

FLUSH MOUNTED PANEL BOARD.

TELEPHONE MOUNTING BOARD.

TEST WELL/GROUND ROD

GROUND ROD - 5/8" x 10' COPPER CLAD

CADWELD CONNECTION

MECHANICAL CONNECTION

GROUNDING WIRE

GROUND BAR

SURGE SUPPRESSOR GROUND BAR

METER AND MAIN BREAKER

MANUAL XFR SWITCH AND GEN. RECPT.

GPS ANTENNA

ELECTRICAL POWER

T-1 LINE

WIRE AND CONDUIT

FLEXIBLE CONDUIT

CONDUIT CONCEALED IN WALLS OR ABOVE CEILING W/ 2 #12, #12 GND, 3/4" C., UNLESS NOTED OTHERWISE.

CONDUIT ROUTED UNDER FLOOR OR BELOW GRADE W/ 2 #12, #12 GRD., 3/4" C., UNLESS NOTED OTHERWISE.

CONDUIT TURNING UP.

CONDUIT TURNING DOWN.

1-LINE DIAGRAM

- CIRCUIT BREAKER, FIXED MOUNTED.
- CIRCUIT BREAKER, DRAWOUT MOUNTING.
- FUSIBLE SWITCH. SIZE AS INDICATED ON DRAWINGS.
- TRANSFORMER. SEE ONE-LINE FOR TYPE AND SPECIFICATION.
- CURRENT TRANSFORMER
- METERING DEVICE
- PANELBOARD, MAIN LUG ONLY
- PANELBOARD, MAIN CIRCUIT BREAKER
- TRANSFER SWITCH - MANUAL OR AUTOMATIC
- INDICATES A FEED-THROUGH LUG CONNECTION
- UNINTERRUPTIBLE POWER SUPPLY
- GENERATOR WITH INTEGRAL PROTECTION
- WEATHERHEAD

SHEET INDEX

| | |
|-----|--|
| E-1 | SPECS/GENERAL NOTES/LEGENDS/SHEET INDEX |
| E-2 | ENLARGED POWER PLAN |
| E-3 | ONE-LINE AND EXISTING/NEW PANEL SCHEDULE |
| E-4 | EQUIPMENT/ANTENNA GROUNDING PLAN AND NOTES |
| | |
| | |
| | |
| | |

ABBREVIATIONS

- | | |
|--------------|---------------------------------------|
| C.O. | = CONDUIT ONLY |
| PVC. | = SCHEDULE 40 PLASTIC CONDUIT |
| GRC. | = GALVANIZED RIGID CONDUIT |
| MTD. | = MOUNTED |
| W.P. | = WEATHERPROOF |
| U.O.N. | = UNLESS OTHERWISE NOTED |
| G. OR GRD. | = GROUND |
| N. OR NEUT. | = NEUTRAL |
| A. OR AMP. | = AMPERE |
| KW. | = KILOWATTS |
| W. | = WATTS |
| ~ | = PHASE |
| DIA | = DIAMETER |
| H.P. OR HP | = HORSEPOWER |
| XFMR | = TRANSFORMER |
| C.B. | = CIRCUIT BREAKER |
| CKT. | = CIRCUIT |
| SW. | = SWITCH |
| MTS | = MANUAL TRANSFORMER SWITCH |
| F.A. | = FIRE ALARM |
| RECPT. | = RECEPTACLE |
| E.C. | = ELECTRIC CONTRACTOR |
| G.C. | = GENERAL CONTRACTOR |
| 1P, 2P, & 3P | = SINGLE POLE, TWO POLE, & THREE POLE |
| EGB | = EQUIPMENT GROUND BUS |
| MGB | = MAIN GROUND BUS |
| AFC | = AVAILABLE FAULT CURRENT |
| AWG | = AMERICAN WIRE GAUGE |
| BCW | = BARE TINNED COPPER WIRE |
| GPS | = GLOBAL POSITIONING SYSTEM |
| PPC | = POWER PROTECTION CABINET |
| TYP. | = TYPICAL |
| RGS | = RIGID GALVANIZED STEEL |
| EMT | = ELECTRICAL METALLIC TUBING |
| DWG | = DRAWING |
| BTS | = BASE TRANSMISSION SYSTEM |
| GEN | = GENERATOR |
| BSCW | = BARE STRANDED COPPER WIRE |
| ISCW | = INSULATED STRANDED COPPER WIRE |

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SEAL



| NO. | DATE | DESCRIPTION | BY |
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| 1 | 02/22/20 | REVIEW | REW |
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PROJECT INFORMATION

JOB: 13-106-04

SL04393A

(SL40XC029)

PAC BUSINESS

PARK

11778 LOAN PEAK PKWY

DRAPER, UTAH 84020

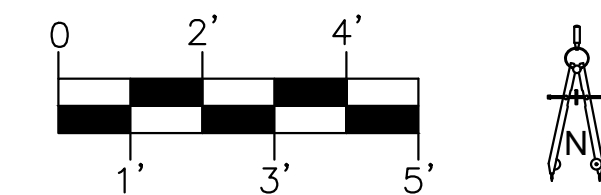
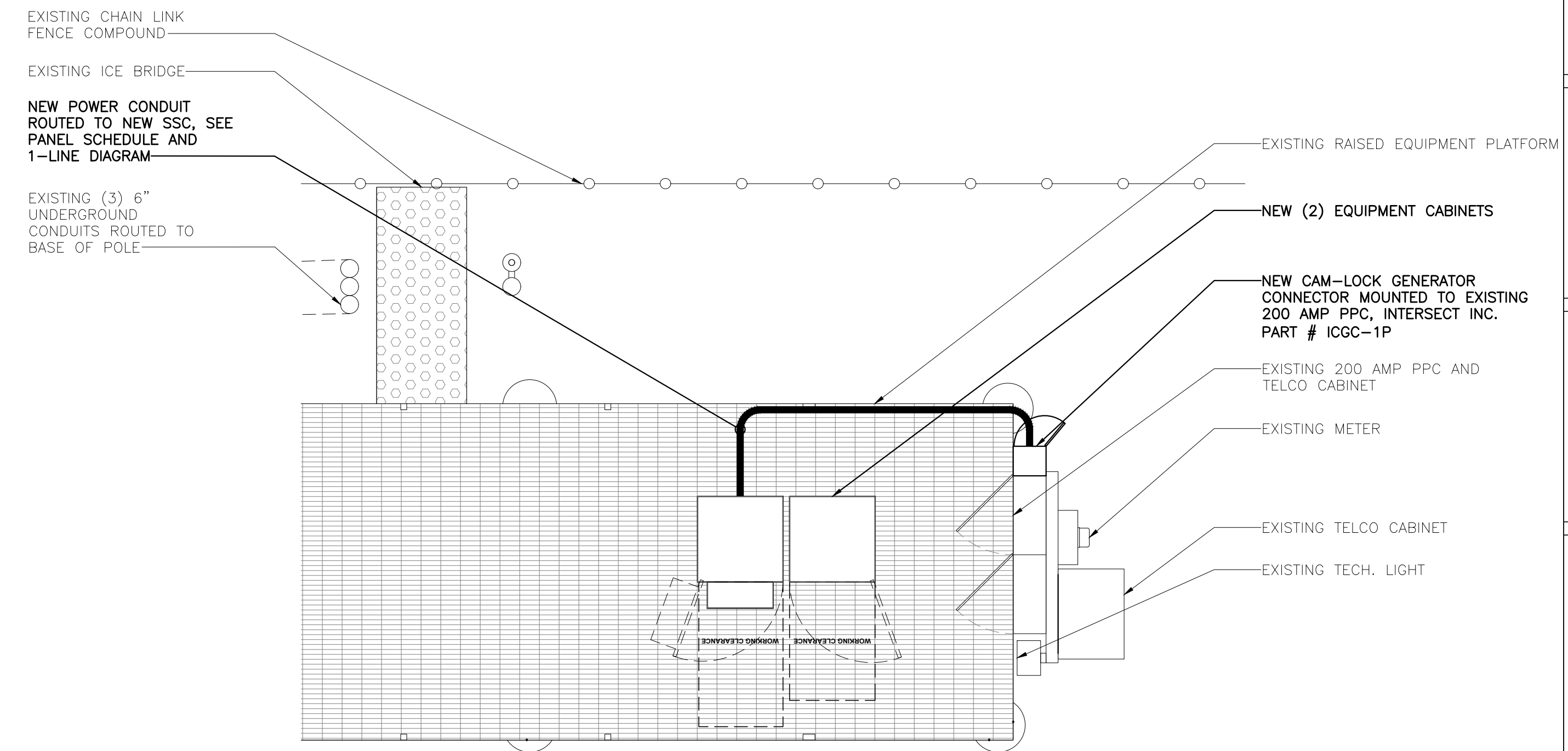
SHEET TITLE

SPECS / GENERAL
NOTES / LEGENDS /
SHEET INDEX

JURISDICTIONAL APPROVAL

SHEET NUMBER

E-1



PROJECT INFORMATION

JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS
PARK

11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

SHEET TITLE

ENLARGED POWER
PLAN

—JURISDICTIONAL APPROVAL—

—SHEET NUMBER—

E-2

RFDS VER: 1 DATED 2/9/2021 3:12:36PM

| EXISTING 200 AMP PPC PANEL | | | | | ELECTRICAL PANEL SCHEDULE | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|----------|---------|------------|----------|----------------------------|-------------------|---------|---------|----------|------------|---------|----------|------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | 65/10KAIC SERIES RATED | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: PPC | | | | | VOLTAGE: 240 / 120 V 1ø,3W | | | | | | | | | | | | | | | | | | | | | | |
| MOUNTING: SURFACE | | | | | MAINS: 200 A MCB | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | BUS: 200 A CU | | | | | | | | | | | | | | | | | | | | | | |
| LOAD DESCRIPTION | EMT COND | CU GRND | PHASE NEUT | CKT BRKR | CIR NO. | LOAD AMPS PHASE A | PHASE B | CIR NO. | CKT BRKR | PHASE NEUT | CU GRND | EMT COND | LOAD DESCRIPTION | | | | | | | | | | | | | | |
| BUSSED SPACE | | | | | 1 | 0.0 | | | 20 | 12 | 12 | 3/4" | MISC BBU/HVAC | | | | | | | | | | | | | | |
| | | | | | | 1.5 | | | 2 | | | | | | | | | | | | | | | | | | |
| BUSSED SPACE | | | | | 3 | | 0.0 | | | 12 | | | MISC CONT. | | | | | | | | | | | | | | |
| | | | | | | | 1.8 | 4 | 2 | | | | BUSSED SPACE | | | | | | | | | | | | | | |
| MISC LIGHT | 3/4" | 12 | 12 | 20 | 5 | 12.0 | | | 6 | | | | BUSSED SPACE | | | | | | | | | | | | | | |
| MISC OUTLET | 3/4" | 12 | 12 | 20 | | 3.0 | | | | | | | | | | | | | | | | | | | | | |
| BUSSED SPACE | | | | | 7 | | 12.0 | | | | | | BUSSED SPACE | | | | | | | | | | | | | | |
| | | | | | | | 1.5 | 8 | | | | | | | | | | | | | | | | | | | |
| BUSSED SPACE | | | | | 9 | 1.5 | | | 100 | 3 | 8 | 1-1/4" | MISC MMBS | | | | | | | | | | | | | | |
| | | | | | | 15.0 | | | 10 | | | | MISC CONT. | | | | | | | | | | | | | | |
| MISC FAN | 3/4" | 12 | 12 | 10 | 11 | | 15.0 | | | 3 | | | | | | | | | | | | | | | | | |
| | | | | 1 | | | 15.0 | 12 | 2 | | | | | | | | | | | | | | | | | | |
| | | | | | | 118.3 | 118.0 | | | | | | | CONTRACTOR TO INSTALL APPROVED HANDLE TIE ON ALL SHARED NEUTRAL CIRCUITS. | | | | | | | | | | | | | |
| 1 PHASE DEMAND (VA) | | | | | | | | | | | | | | SYMBOL LIST | | | | | | | | | | | | | |
| LIGHTING | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25% OF LIGHTING | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECEPTACLES | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MECHANICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25% LARGEST MOTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MISCELLANEOUS | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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GENERAL GROUNDING NOTES

1) ALL GROUNDING LEADS INSTALLED TO ENSURE A SMOOTH PATH TO COUNTERPOISE WITHOUT KINKS OR SHARP BENDS OR RETURN UPWARDS.

2) CONTRACTOR WILL UTILIZE THE "FALL OF POTENTIAL MEASUREMENT METHOD" PER NETA STANDARDS, UTILIZING THE ACME-4500 MEASURING DEVICE OR APPROVED T-MOBILE EQUIP. ALL GROUND TESTING TO BE PERFORMED IN ACCORDANCE WITH THE T-MOBILE TESTING PROCEDURE. CONTRACTOR SHALL BACKFILL OF GROUNDING TRENCHES WITH CONCRETE TO POWER UTILITY GRADE AND PRIOR TO ANY BACKFILL OF GROUNDING TRENCHES, ELECTRICAL CONTRACTOR WILL PERFORM A MINIMUM OF ONE TEST OF GROUNDING FOR TESTING GROUNDING RESISTANCE. CONTRACTOR WILL INSTALL THE MINIMUM NUMBER OF GROUND PLATES INDICATED, SEE GROUNDING PLAN FOR APPROX. LOCATIONS. CONTRACTOR WILL INSTALL ADDITIONAL GROUNDING AS REQUIRED TO ACHIEVE 5 OHMS OR LESS TO GROUND.

3) IT IS THE INTENT THAT AT NO TIME ARE THE GROUND LEADS TO BE INSTALLED BELOW THE SURFACE OF THE AREAS DEDICATED FOR FUTURE DISCARDED PADS OR SHELTERS.

4) THE CONTRACTOR WILL DOCUMENT MEGGER TEST RESULTS, REDLINE THE DRAWINGS FOR THE LOCATION OF ALL UNDERGROUND GROUNDING COMPONENTS AND PHOTOGRAPH WITH A DIGITAL CAMERA THE ENTIRE NEWLY INSTALLED GROUNDING SYSTEM PRIOR TO BACKFILL OF ANY OPEN TRENCHES.

5) ANY CHANGES TO THIS BASIC GROUNDING DESIGN GUIDELINE, ROUTING DESIGN, OR MODIFICATIONS, WILL BE REQUESTED AND APPROVED BY WAY OF RED LINE DRAWINGS. IT IS THE RESPONSIBILITY OF THE SELECTED CONTRACTOR TO ENSURE THE NEWLY INSTALLED GROUNDING SYSTEM MEETS THE T-MOBILE STANDARD OF 5 OHMS OR LESS.

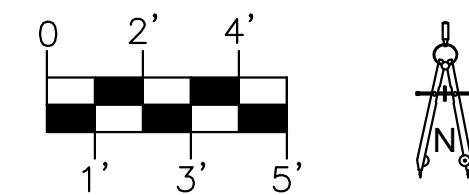
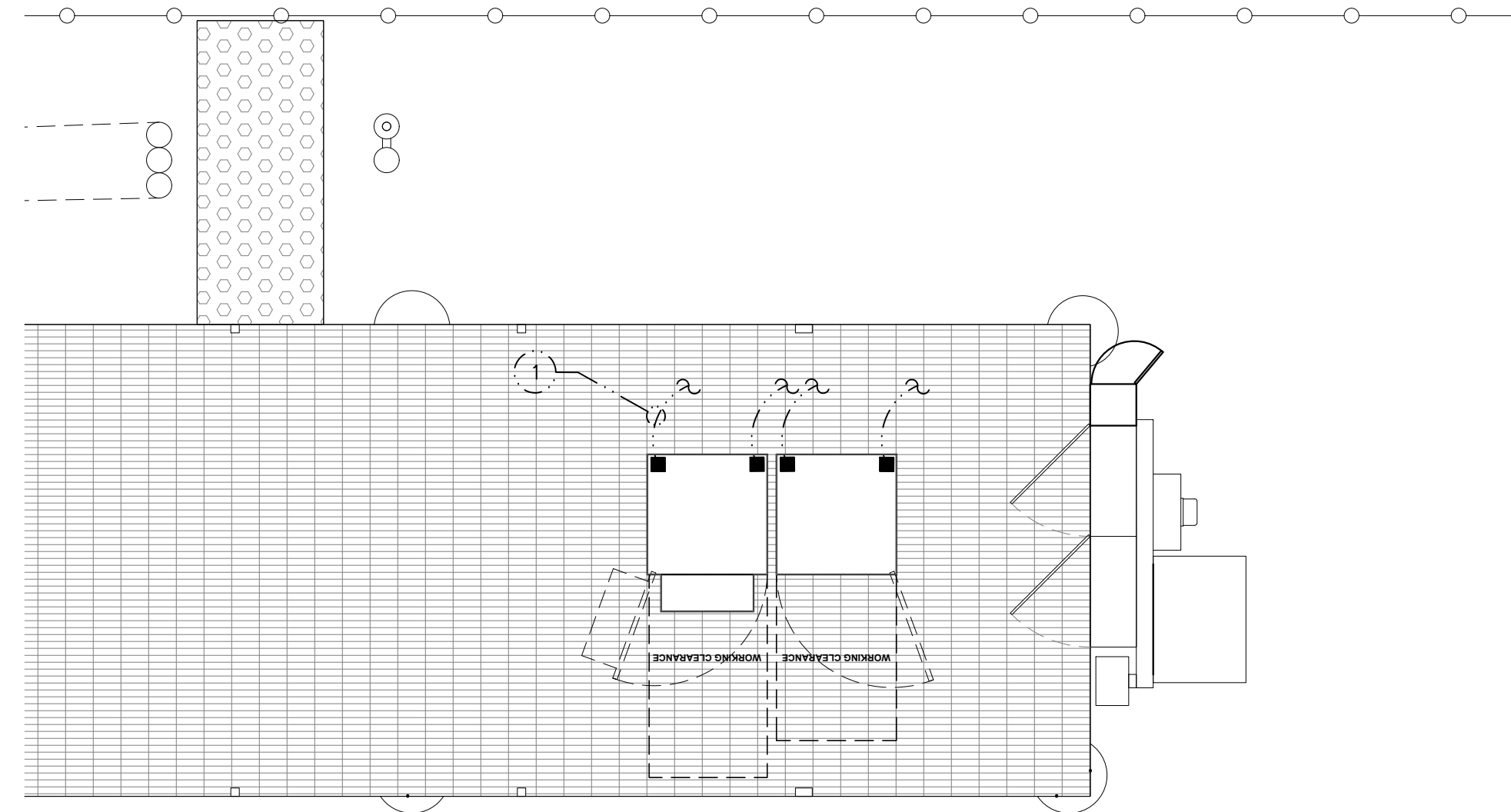
6) ELECTRICAL CONTRACTOR SHALL COORDINATE TELCO AND POWER ROUTING WITH BUILDING MANAGER PRIOR TO ROUGH-IN.

7) DURING RUNNING CONDUIT ROUTE - CONTRACTOR SHALL CONTACT THE T-MOBILE PROJECT MANAGER AND VERIFY THE EQUIPMENT CABINET LAYOUT CONFIGURATION AND ROUTE CONDUITS ACCORDINGLY.

8) ALL EXOTHERMIC CONNECTIONS INCLUDING THOSE TO GATE POST, FENCES AND ICE BRIDGE POSTS SHALL BE MADE BELOW GRADE.

GROUNDING KEY NOTES

- ① #2 TBCW, FROM EQUIPMENT TO EXISTING GROUND RING (TYPICAL)
- ② GROUND TO EXISTING SECTOR GROUND BAR WITH #2 TBCW, TYPICAL



| NO. | DATE | DESCRIPTION | BY |
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PROJECT INFORMATION
JOB: 13-106-04

SL04393A
(SL40XC029)
PAC BUSINESS
PARK
11778 LOAN PEAK PKWY
DRAPER, UTAH 84020

—SHEET TITLE—

EQUIPMENT/ANTENNA GROUNDING PLAN AND NOTES

—JURISDICTIONAL APPROVAL—

—SHEET NUMBER—

E-4

GROUNDING NOTES

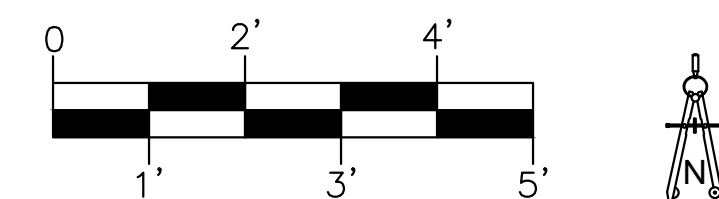
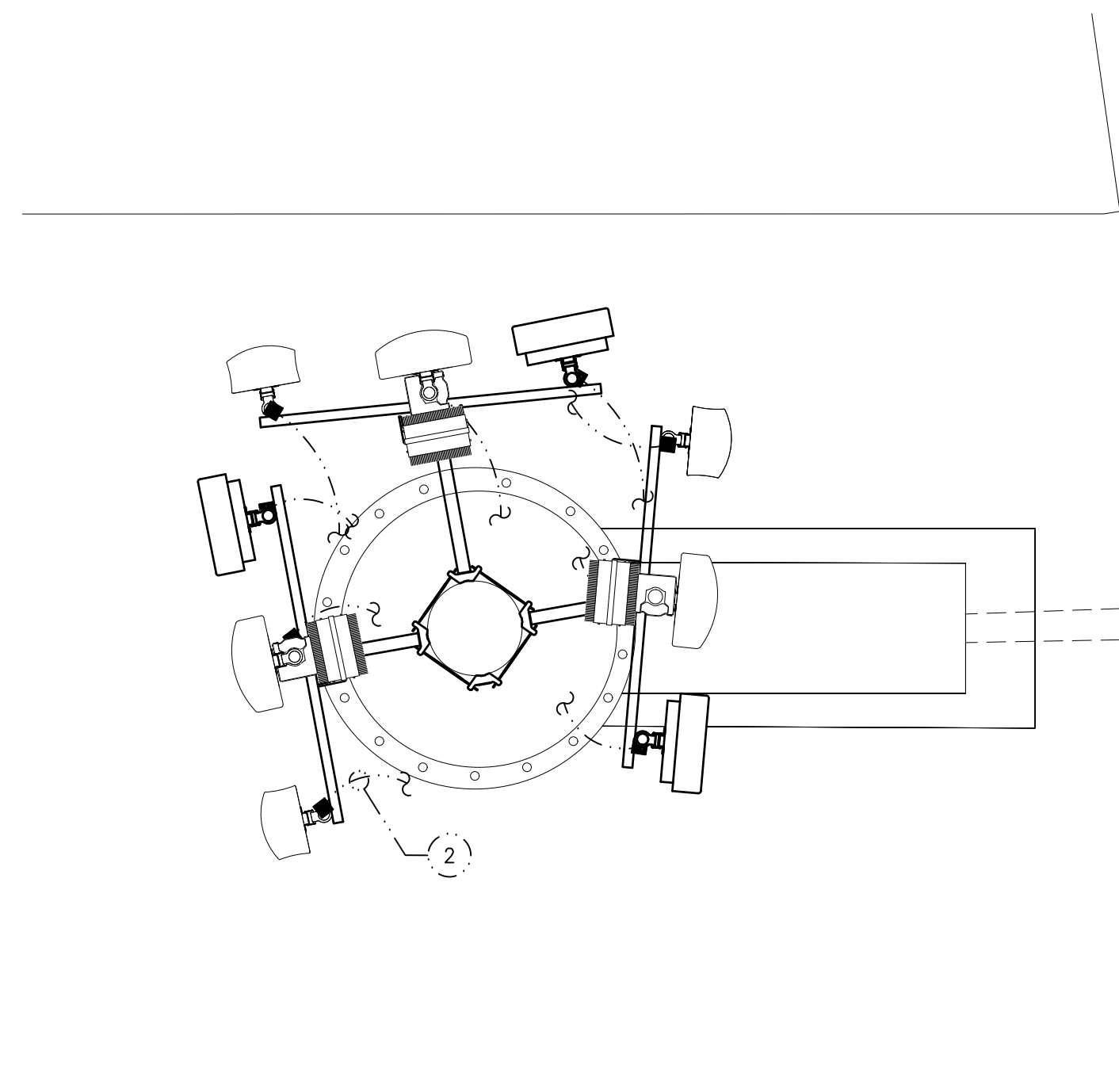
SCALE: N.T.S.

3

EQUIPMENT GROUNDING PLAN

SCALE: 1/4"=1'-0"

1



NOT USED

SCALE: N.T.S.

4

ANTENNA GROUNDING PLAN

SCALE: 1/2" = 1'-0"

2